

REMARKS

Claims 1-4, 6-9, 13, 17, 18, 20, 24 and 103-109 are all the claims pending in the application, claims 10, 11 and 14 having been newly canceled above.

I. Preliminary Matters. The Examiner indicated that page 9/10 of the drawings has been received. Applicant also received correspondence indicating that the IDS filed May 7, 2007, had been considered (but does not restart applicant's time period), together with PTO/SB/08A and POT/SB/08B initialed by the Examiner.

II. Summary of the Office Action. The Examiner rejected claims 1-4, 6-9, 14, 17, 18, 20, 24 and 103-109 under 35 USC 112, first paragraph, because the specification, while enabling for treating fish, "does not reasonably provide enablement for the same process with any 'meat' or 'live animal.'" Claims 1-4, 6-11, 13, 14, 17, 18, 20, 24 and 103-109 were rejected under 35 USC 103(a) as being unpatentable over Hisateru in view of Yamaoka et al., with the references and rejection incorporated from the office action mailed November 2, 2006.

III. Claim Rejections Under 35 USC 112. All the claims have been amended to limit them to fish.

IV Claims Rejections Under 35 USC 103. The rejection of claims 1-4, 6-9, 13, 17, 18, 20, 24 and 103-109 (claims 10, 11 and 14 having been newly canceled above) as obvious over Hisateru in view of Yamaoka et al. (US 5484619) must be withdrawn.

All of the claims contain the limitation that the treatment gas is a partially purified smoke "that imparts smoke flavor."

All of the claims have also been amended above to incorporate the limitation that the smoke that imparts smoke flavor is solely purified by the fish's membranes, or solely by water and the fish's membranes, whereby smoke flavor is prevented from being imparted to the meat.

The office action stated that Applicant's argument that preventing smoke flavor from entering the meat of the fish was not convincing "as all of the active method steps claimed are taught by the references of record and thus one of ordinary skill in the art would expect the same results as instantly claimed, absent any clear and/or convincing arguments and/or evidence to the contrary." However, applicant has indeed presented clear and convincing evidence to the contrary - as discussed in more detail below, the references filed on May 7, 2007, under an Information Disclosure Statement clearly and convincingly establish that fish meat picks up flavor from the environment through the gill membranes, so that the ordinary artisan would expect that solely a fish's membranes, or solely a fish's membranes and water, would NOT prevent flavor from entering the meat of the fish.

Col. 1, line 21, to col. 2, line 59, of US Patent 6902675 to Kelly et al disclose that fish produced by aquaculture are susceptible to developing undesirable flavors from hydrophobic terpenoids released into the water by cyanobacteria. Col. 2, lines 60-63, specifically state "the terpenoids produced by cyanobacteria are released into the water and absorbed mainly through the gills of fish. The chemicals are then absorbed by the lipid-rich tissues of fish, thereby causing the undesired off-flavor." Accordingly, this reference clearly discloses that the flavor (or taste) of fish is affected by chemicals in the water that are absorbed through the gills.

Another reference states "Regardless of the source, the compounds are absorbed by fish through the gills and accumulate in the fish." Col. 2, lines 5-8, of Van der Ploeg, Testing Flavor Quality of Preharvest Channel Catfish", Southern Regional Aquaculture Center, November 1991, SRAC Publication No. 431.

Another reference states "Fish absorb chemical compounds through their gill membranes, as well as through their digestive tract." Page 1, paragraph 5, sentence 2, of Killian, H. Steven,

"Off-Flavor (Catfish", University of Arkansas Division of Agriculture Cooperative Extension Service [on-line], retrieved on 2007-05-01 from <http://www.uaex.edu/aquaculture2/FSA/FSA9051.htm>.

Still another reference states "Other farms, with their fish populations crowded in small ponds accumulate fish waste, so their fish taste is more prone to off flavors." Page 1, paragraph 3, sentence 3, of Regal Springs Tilapia - High Quality Fillets, Pure Tilapia, Farm Environment [n-line], retrieved on 2007-05-01 from <http://www.regalsprings.com/farm.html>.

The above references were submitted under a May 7, 2007, Information Disclosure Statement, which the Examiner signed to indicate they had been considered on May 24, 2007.

As stated in Part II of the October 10, 2007, Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.* (the "Guidelines"), the US Supreme Court requires that obviousness be determined by making the following factual inquiries:

- "(1) Determining the scope and content of the prior art;
- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) Resolving the level of ordinary skill in the pertinent art."

Part II of the Guidelines goes on to state that "Objective evidence relevant to the issue of obviousness must be evaluated by Office personnel. Such evidence . . . may include evidence of . . . unexpected results." To the same effect, Part V of the Guidelines states that rebuttal evidence may include evidence that "(3) the results of the claimed combination were unexpected."

Applying this analysis, the cited prior art contains Yamaoka, which imparts taste to fish (col. 1, lines 9-10, and 39-40; col. 3, lines 24-25, for example), and Hisateru, which discloses bubbling carbon dioxide (which is tasteless and odorless) into water into which fish are placed.

The differences between the claimed invention and the prior art are that the claimed invention bubbles a partially filtered smoke that imparts taste into water into which fish are placed, yet the fish membranes prevent the imparting of smoke flavor because smoke flavor is filtered out solely by the fish's gills, or solely by the fish's gills and water.

The level of ordinary skill in the art would include the references that were submitted under the May 7, 2007, Information Disclosure Statement discussed above, which specifically disclose that flavor imparting components in the water are absorbed through the gill membranes. Accordingly, the level of ordinary skill in the art would be that flavor imparting components in water pass through the gills and flavor the fish.

In light of the above, one of ordinary skill would expect a smoke "that imparts smoke flavor" to be absorbed through the gills and to impart smoke flavor to the fish meat. However, Applicant claims the completely unexpected result that solely the animal's membranes (or solely water and the animal's membranes) act to super-purify the smoke and PREVENT smoke flavor from being imparted to the meat. Because this result is completely unexpected, the rejection for obviousness must be withdrawn.

In other words, a person of ordinary skill would expect that a smoke "that imparts smoke flavor" would be absorbed through the gills and flavor the meat. It is totally unexpected that "solely said fish's membranes" (or "solely water and said fish's membranes") would "act to super-purify said smoke; whereby smoke flavor is prevented from being imparted to said meat."

An ordinary artisan would not have predicted this result. Because this result is totally unexpected and unpredicted, the rejection for obviousness must be withdrawn.

Of course, using solely the fish's membranes (or solely water and the fish's membranes) to prevent imparting of smoke flavor to the fish's meat (from smoke that imparts smoke flavor) is a new function that is not disclosed or suggested by the cited references, alone or in combination, and is beyond the level of ordinary skill in the art, as the ordinary artisan would expect smoke flavor to be imparted to the meat for the reasons cited above. Accordingly, the rejection for obviousness must be withdrawn for this reason as well.


V. Interview. The courtesy of a telephone interview on October 10, 2007, with the Examiner and the Examiner's supervisor, Ms. Lien Tran, is gratefully acknowledged. During the interview, a prior draft of this response was discussed. The amendments restricting the claims to fish were indicated as overcoming the rejection under 35 USC 112. The examiner indicated that, because the cited references disclose the same steps as the invention, the response should be revised to indicate why the claimed invention provides unexpected results. The examiner stated that the applicant's attorney should cite references for the expectation of flavor being imparted and show why the claimed invention provides an unexpected result.

IV. Conclusion. In view of the above, it is respectfully submitted that this application is now in condition for allowance, and an early action to that effect is earnestly solicited. If the claims would be in condition for allowance except for minor revisions, Applicant's attorney courteously invites a telephone interview initiated by the Examiner so that such revisions can be effected by Examiner's amendment.

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Respectfully submitted,

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Martin E. Hsia
Registration No. 32,471
Cades Schutte LLP
P.O. Box 939
Honolulu, Hawaii 96808
Tel. (808) 544-3835

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